

Notice of Allowability

Application No.

09/973,780

Examiner

Vincent P. Barth

Applicant(s)

YONEZAWA, MAKOTO

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment dated 22 Sept. 2003.
2. ☒ The allowed claim(s) is/are 17-42.
3. ☒ The drawings filed on 11 October 2001 and 22 September 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the margin according to 37 CFR 1.121(d).

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1 <input type="checkbox"/> Notice of References Cited (PTO-892) | 5 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6 <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No. <u>1203</u> . |
| 3 <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No. _____ | 7 <input type="checkbox"/> Examiner's Amendment/Comment |
| 4 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9 <input type="checkbox"/> Other _____ |

DETAILED ACTION

Preliminary Comments

1. Applicant's Amendments dated 22 September 2003 have placed the Application in a condition for allowance as written. Moreover, Figures 3 and 4 submitted therewith have been accepted, and provide a more clear illustration of the invention. An Interview Summary has been prepared by the Examiner to provide a record of an interview with Counsel for Applicants dated 8 December 2003, which related to the amendments to the Drawings and Specification, and which is submitted herewith. Accordingly, the following represents a reasoned statement for allowability.

Allowable Subject Matter

2. Claims 17-42 are allowable, since the prior art references, either considered alone or in combination, do not disclose or render obvious the limitations set forth therein.
3. Referring to Claim 17, the prior art references, either considered alone or in combination, do not disclose or render obvious the limitations whereby an image pickup device comprises a sample stage for imaging a sample in a first direction, an illumination source for illuminating the sample, a first spatial filter with a plurality of slits along a first direction and extending in a second direction perpendicular to the first direction, an image sensor having a plurality of light receiving elements in a two-dimensional array, a second spatial filter with a plurality of slits along a first direction and extending in a second direction perpendicular to the first direction, an objective lens arranged between said sample stage and second spatial filter forming an image of

transmitted light or reflected light from the sample on the image sensor via the slits of the second spatial filter, wherein the first and second spatial filters are arranged so that light emitted from the slits of the first spatial filter strikes the sample and the image sensor through the slits of the second spatial filter, in combination with the remaining limitations in the claim. Claims 18-21 are allowable based on their dependency upon the claim from which each is dependent.

Referring to Claim 22, the prior art references, either considered alone or in combination, do not disclose or render obvious the limitations whereby an image pickup device comprises a sample stage for imaging a sample in a first direction, an illumination source for illuminating the sample, a first spatial filter with a plurality of slits along a first direction and extending in a second direction perpendicular to the first direction, an image sensor having a plurality of light receiving elements in a two-dimensional array, a second spatial filter with a plurality of slits along a first direction and extending in a second direction perpendicular to the first direction, an objective lens arranged between said sample stage and second spatial filter forming an image of transmitted light or reflected light from the sample on the image sensor via the slits of the second spatial filter, wherein the first and second spatial filters are arranged so that light emitted from the slits of the first spatial filter strikes the sample and the image sensor through the slits of the second spatial filter, in combination with the remaining limitations in the claim. Claims 23-25 are allowable based on their dependency upon the claim from which each is dependent.

Referring to Claim 26, the prior art references, either considered alone or in combination, do not disclose or render obvious the limitations whereby an image pickup device comprises a sample stage for imaging a sample in a first direction, an illumination source for illuminating the sample, a first spatial filter with a plurality of slits along a first direction and extending in a second

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direction perpendicular to the first direction, an image sensor having a plurality of light receiving elements in a two-dimensional array, a second spatial filter with a plurality of slits along a first direction and extending in a second direction perpendicular to the first direction, an objective lens arranged between said sample stage and second spatial filter forming an image of transmitted light or reflected light from the sample on the image sensor via the slits of the second spatial filter, wherein the first and second spatial filters are arranged so that light emitted from the slits of the first spatial filter strikes the sample and the image sensor through the slits of the second spatial filter, in combination with the remaining limitations in the claim. Referring to Claim 27, the prior art references, either considered alone or in combination, do not disclose or render obvious the limitations whereby an image pickup device comprises a sample stage for imaging a sample in a first direction, an illumination source for illuminating the sample, a first spatial filter with a plurality of slits along a first direction and extending in a second direction perpendicular to the first direction, an image sensor having a plurality of light receiving elements in a two-dimensional array, a second spatial filter with a plurality of slits along a first direction and extending in a second direction perpendicular to the first direction, an objective lens arranged between said sample stage and second spatial filter forming an image of transmitted light or reflected light from the sample on the image sensor via the slits of the second spatial filter, wherein the first and second spatial filters are arranged so that light emitted from the slits of the first spatial filter strikes the sample and the image sensor through the slits of the second spatial filter, in combination with the remaining limitations in the claim. Claims 28 and 29 are allowable based on their dependency upon the claim from which each is dependent. Referring to Claim 30, the prior art references, either considered alone or in combination, do not disclose or

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render obvious the limitations whereby an image pickup device comprises a sample stage for imaging a sample in a first direction, an illumination source for illuminating the sample, a first spatial filter with a plurality of slits along a first direction and extending in a second direction perpendicular to the first direction, an image sensor having a plurality of light receiving elements in a two-dimensional array, a second spatial filter with a plurality of slits along a first direction and extending in a second direction perpendicular to the first direction, an objective lens arranged between said sample stage and second spatial filter forming an image of transmitted light or reflected light from the sample on the image sensor via the slits of the second spatial filter, wherein the first and second spatial filters are arranged so that light emitted from the slits of the first spatial filter strikes the sample and the image sensor through the slits of the second spatial filter, in combination with the remaining limitations in the claim. Claims 31 and 32 are allowable based on their dependency upon the claim from which each is dependent. Referring to Claim 33, the prior art references, either considered alone or in combination, do not disclose or render obvious the limitations whereby a photomask defect inspection device comprises a sample stage for imaging a sample in a first direction, an illumination source for illuminating the sample, a first spatial filter with a plurality of slits along a first direction and extending in a second direction perpendicular to the first direction, an image sensor having a plurality of light receiving elements in a two-dimensional array, a second spatial filter with a plurality of slits along a first direction and extending in a second direction perpendicular to the first direction, an objective lens arranged between said sample stage and second spatial filter forming an image of transmitted light or reflected light from the sample on the image sensor via the slits of the second spatial filter, wherein the first and second spatial filters are arranged so that light emitted from

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the slits of the first spatial filter strikes the sample and the image sensor through the slits of the second spatial filter, in combination with the remaining limitations in the claim. Claims 34-36 are allowable based on their dependency upon the claim from which each is dependent.

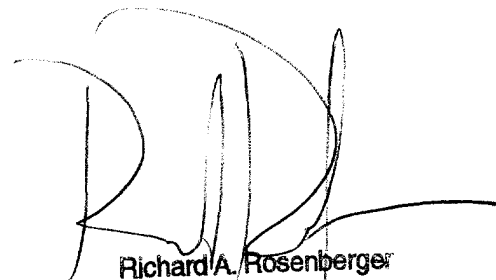
Referring to Claim 37, the prior art references, either considered alone or in combination, do not disclose or render obvious the limitations whereby a photomask defect inspection device comprises a sample stage for imaging a sample in a first direction, an illumination source for illuminating the sample, a first spatial filter with a plurality of slits along a first direction and extending in a second direction perpendicular to the first direction, an image sensor having a plurality of light receiving elements in a two-dimensional array, a second spatial filter with a plurality of slits along a first direction and extending in a second direction perpendicular to the first direction, an objective lens arranged between said sample stage and second spatial filter forming an image of transmitted light or reflected light from the sample on the image sensor via the slits of the second spatial filter, wherein the first and second spatial filters are arranged so that light emitted from the slits of the first spatial filter strikes the sample and the image sensor through the slits of the second spatial filter, in combination with the remaining limitations in the claim. Claims 38-40 are allowable based on their dependency upon the claim from which each is dependent. Referring to Claim 41, the prior art references, either considered alone or in combination, do not disclose or render obvious the limitations whereby a photomask defect inspection device comprises a sample stage for imaging a sample in a first direction, an illumination source for illuminating the sample, a first spatial filter with a plurality of slits along a first direction and extending in a second direction perpendicular to the first direction, an image sensor having a plurality of light receiving elements in a two-dimensional array, a second spatial

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filter with a plurality of slits along a first direction and extending in a second direction perpendicular to the first direction, an objective lens arranged between said sample stage and second spatial filter forming an image of transmitted light or reflected light from the sample on the image sensor via the slits of the second spatial filter, wherein the first and second spatial filters are arranged so that light emitted from the slits of the first spatial filter strikes the sample and the image sensor through the slits of the second spatial filter, in combination with the remaining limitations in the claim. Claim 42 is allowable based on its dependency upon the claim from which it is dependent.

CONCLUSION

4. Applicants' Claims 17-42 are allowed based on the reasons set forth above.
5. Any inquiries concerning this communication from the Examiner should be directed to Vincent P. Barth, whose telephone number is 703-605-0750, and who may be ordinarily reached from 9:00 a.m. to 5:30 p.m., Monday through Friday. *Note that Examiner Barth expects to move to the new U.S. Patent Office location on or about 21 January 2004, and will have a new telephone number following that date, which is: (571)272-2410.* The official fax number for communications to the group is 703-872-9306.
6. If attempts to reach the Examiner prove unsuccessful, the Examiner's supervisor is Frank G. Font, who may be reached at 703-308-4881.
7. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.



Richard A. Rosenberger
Primary Examiner